

Smart Skies			
2004 Mathematics			
Grade Expectations			
Vermont Mathematics			
Grade 5			
Activity/Lesson	State	Standards	
Fly by Math	VT	MA.5.M5:16	Determines elapsed and accrued time to the nearest minute.
Fly by Math	VT	MA.5.M5:25	Identifies or describes representations or elements of representations that best display a given set of data or situation, consistent with the representations required in M5:23. Organizes and displays data using line plots, bar graphs, tally charts and frequency charts, or tables to answer question related to the data, to analyze the data to formulate or justify conclusions, to make predictions, or to solve problems.
Fly by Math	VT	MA.5.M5:28	In response to a teacher- or student-generated question or hypothesis, collects appropriate data, organizes the data, appropriately displays/represents numerical and/or categorical data, analyzes the data to draw conclusions about the questions or hypothesis being tested, and when appropriate makes predictions, asks new questions, or makes connections to real-world situations.
Line Up with Math	VT	MA.5.M5:16	Determines elapsed and accrued time to the nearest minute.
Line Up with Math	VT	MA.5.M5:20	Demonstrates a conceptual understanding of linear relationships ($y = kx$) as a constant rate of change by identifying, describing, or comparing situations that represent constant rates of change.
Smart Skies			
2004 Mathematics			
Grade Expectations			
Vermont Mathematics			
Grade 6			
Activity/Lesson	State	Standards	
Fly by Math	VT	MA.6.M6:25	Organizes and displays data using bar graphs, tables, frequency tables, line plots, circle graphs, and stem-and-leaf plots to answer question related to the data, to analyze the data to formulate or justify conclusions, or to make predictions.

Fly by Math	VT	MA.6.M6:28	In response to a teacher- or student-generated question, makes a hypothesis, collects appropriate data, organizes the data, appropriately displays/represents numerical and/or categorical data, analyzes the data to draw conclusions about the questions or hypothesis being tested, and when appropriate makes predictions, asks new questions, or makes connection to real-world situations.
Line Up with Math	VT	MA.6.M6:20	Demonstrates conceptual understanding of linear relationships ($y = kx$; $y = mx + b$) as a constant rate of change by constructing or interpreting graphs of real occurrences and describing the slope of linear relationships (faster, slower, greater, or smaller) in a variety of problem situations; and describes how change in the value of one variable relates to change in the value of a second variable in problem situations with constant rates of change.
Smart Skies			
2004 Mathematics			
Grade Expectations			
Vermont Mathematics			
Grade 7			
Activity/Lesson	State	Standards	
Fly by Math	VT	MA.7.M7:9	Uses properties of angle relationships resulting from two or three intersecting lines (adjacent angles, vertical angles, straight angles, or angle relationships formed by two nonparallel lines cut by a transversal), or two parallel lines cut by a transversal to solve problems.
Fly by Math	VT	MA.7.M7:25	Identifies or describes representations or elements of representations that best display a given set of data or situation, consistent with the representations required in M7:23. Organizes and displays data using line graphs or histograms, bar graphs, tables, frequency tables, line plots, and stem-and-leaf plots to answer question related to the data, to analyze the data to formulate or justify conclusions, or to make predictions.
Fly by Math	VT	MA.7.M7:28	In response to a teacher- or student-generated question, makes a hypothesis, collects appropriate data, organizes the data, appropriately displays/represents numerical and/or categorical data, analyzes the data to draw conclusions about the questions or hypothesis being tested, and when appropriate makes predictions, asks new questions, or makes connection to real-world situations.

Line Up with Math	VT	MA.7.M7:9	Uses properties of angle relationships resulting from two or three intersecting lines (adjacent angles, vertical angles, straight angles, or angle relationships formed by two nonparallel lines cut by a transversal), or two parallel lines cut by a transversal to solve problems.
Line Up with Math	VT	MA.7.M7:20	Demonstrates conceptual understanding of linear relationships ($y = kx$; $y = mx + b$) as a constant rate of change by solving problems involving the relationship between slope and rate of change, by describing the meaning of slope in concrete situations, or informally determining the slope of a line from a table or graph; and distinguishes between constant and varying rates of change in concrete situations represented in tables or graphs; or describes how change in the value of one variable relates to change in the value of a second variable in problem situations with constant rates of change.
Smart Skies			
2004 Mathematics			
Grade Expectations			
Vermont Mathematics			
Grade 8			
Activity/Lesson	State	Standards	
Fly by Math	VT	MA.8.M8:9	Models situations geometrically. Uses properties and attributes of lines, angles, and two- and three-dimensional shapes) to formulate and solve problems.
Fly by Math	VT	MA.8.M8:25	Organizes and displays data using scatter plots to answer questions related to the data, to analyze the data to formulate or justify conclusions, to make predictions, or to solve problems; or identifies representations or elements of representations that best display a given set of data or situation, consistent with the representations required in M8: 23.
Fly by Math	VT	MA.8.M8:28	In response to a teacher- or student-generated question, makes a hypothesis, collects appropriate data, organizes the data, appropriately displays/represents numerical and/or categorical data, analyzes the data to draw conclusions about the questions or hypothesis being tested, and when appropriate to make predictions, asks new questions, or makes connection to real-world situations. (See also GLEs M24, M25 and M29.)
Line Up with Math	VT	MA.8.M8:9	Models situations geometrically. Uses properties and attributes of lines, angles, and two- and three-dimensional shapes) to formulate and solve problems.

Line Up with Math	VT	MA.8.M8:20	Demonstrates conceptual understanding of linear relationships ($y = kx$; $y = mx + b$) as a constant rate of change by solving problems involving the relationship between slope and rate of change; informally and formally determining slopes and intercepts represented in graphs, tables, or problem situations; or describing the meaning of slope and intercept in context; and distinguishes between linear relationships (constant rates of change) and nonlinear relationships (varying rates of change) represented in tables, graphs, equations, or problem situations; or describes how change in the value of one variable relates to change in the value of a second variable in problem situations with constant and varying rates of change.
Smart Skies			
2004 Mathematics			
Grade Expectations			
Vermont Mathematics			
Grades 9-12			
Activity/Lesson	State	Standards	
Fly by Math	VT	MA.9-12.MHS:11	Uses the attributes, geometric properties, or theorems involving lines, polygons and circles (e.g., parallel, perpendicular, bisectors, diagonals, radii, diameters, central angles, arc length excluding radians), the Pythagorean Theorem, Triangle Inequality Theorem to solve mathematical situations or problems in context.
Fly by Math	VT	MA.9-12.MHS:25	Organizes and displays data using scatter plots, histograms, or frequency distributions to answer questions related to the data, to analyze the data to formulate or justify conclusions, make predictions, or to solve problems; or identifies representations or elements of representations that best display a given set of data or situation, consistent with the representations required in MHS: 23.
Line Up with Math	VT	MA.9-12.MHS:11	Uses the attributes, geometric properties, or theorems involving lines, polygons and circles (e.g., parallel, perpendicular, bisectors, diagonals, radii, diameters, central angles, arc length excluding radians), the Pythagorean Theorem, Triangle Inequality Theorem to solve mathematical situations or problems in context.

Line Up with Math	VT	MA.9-12.MHS:20	Demonstrates conceptual understanding of linear relationships and linear and nonlinear functions (including $f(x) = ax^2$, $f(x) = ax^3$, absolute value function, exponential growth) through analysis of intercepts, domain, range and constant and variable rates of change in mathematical and contextual situations.
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